



Creating and Sustaining Outdoor Classrooms: Evidence-Based Practices

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Course Description

Well-designed, nature-based outdoor classrooms present layered opportunities for whole-child development while supporting educational staff and families.

Through understanding evidence-based strategies that foster children's creativity and resiliency, we'll identify child-centric, open-ended approaches to utilizing space, time and materials outdoors.

Throughout this presentation we will explore real-world scenarios and case-studies as we discover these elements and apply them to the design of outdoor spaces for children, while incorporating the long-term sustainability of these outdoor learning environments.

Learning Objectives

- Describe how the incorporation of welldesigned, nature-based outdoor classrooms into educational programs can support resiliency, creativity and whole-child development.
- Identify components of a child-centric approach to designing outdoor learning environments for children.

Learning Objectives

- Evaluate degree of open-endedness in the design of outdoor spaces for children including the selection of furnishings and materials.
- Explain to educational stakeholders the critical role of staff development and family engagement in the long-term sustainability of outdoor spaces.



"Look deep, deep into nature and then you will understand everything better." –Albert Einstein

Think of a Tree



What is a Well-Designed Outdoor Classroom?



What is a Well-Designed Outdoor Classroom?

An intentionally designed, nature-based outdoor learning environment with the goal of fostering whole child-development and meaningful learning

Components of a Well-Designed Outdoor Classroom



- Evidence-based design principles rooted in child development
- Natural local/regional materials
- Child-centric design approach
- Supports whole child development
- Maximizes choice while offering a level of predictability
- Creates a rich and unique context for learning

Components of a Well-Designed Outdoor Classroom



- Supports skill development across across multiple learning domains simultaneously
- Open-ended loose parts/materials
- Child-size storage
- Positive environment for all children
- Staff professional development and family engagement

Crestridge International and Dual Language Magnet School Omaha, Nebraska





ENTRY FEATURE/PATHS

- ARBOR ENTRY FEATURE (picture 1)
- VERTICAL ACCENTS (ART POLES)
 "DBY CREEK RED" POLIL DEPS IN EX
- "DRY CREEK BED" BOULDERS IN EXISTING SWALE WITH ACCESSIBLE BRIDGE (picture 8)
 COMPACTED CRUSHED STONE PATHWAYS THROUGHOUT, (1/4" MINUS, PLUS FINES OR
- CRUSHED CONCRETE FINES)
 REMOVE CHAIN LINK FENCE (OPTION)

B MUSIC & MOVEMENT

- MUSICAL INSTRUMENT (picture 6)
- STORAGE
- GROUND LEVEL STAGE (FUTURE)

OPEN AREA

EXISTING OPEN AREA

CLIMBING/BALANCE

- NATURAL LOG BALANCE BEAM AND LOG STEPS (picture 7) MAINTAIN 6' USE ZONE AND 9" SETTLED DEPTH
- MAINTAIN 6 USE ZONE AND 9 SETTLED DEPTH ENGINEERED WOOD FIBER (EWF)

GATHERING AREA

NATURAL BENCH SEATING FOR 27 (picture 2)

WATER/SAND AREA

- BOULDER LINED SANDBOX WITH TARP COVER
- WATER TABLE

D

STORAGE

G MESSY MATERIALS

- GIANT TREE COOKIES/NATURAL LOOSE
 PARTS
- 10"-18" DIA. X 4'-8' LONG NATURAL LOGS AT PERIMETER, ANCHORED (picture 9)
- CENTRAL "LOG OF INTEREST" ANCHORED
 +/- 12" DEPTH EWF

BUILDING AREA

- TABLE AND SEATING (picture 11)
- STORAGE EWF SURFACING
- GROUND LEVEL WOOD (COMPOSITE)
- DECKING (FUTURE)

NATURE ART AREA

- TABLE AND SEATING (picture 4)
- VERTICAL ART PANEL (picture 4)
- STORAGE
- EWF SURFACING
- LOCAL REGIONAL FLAGSTONE (FUTURE) (picture 3)

GARDEN AREA

- RAISED BEDS FOR GARDENING AND DIRT
 - RELOCATE COMPOST BIN

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- WORM BIN (OPTION) BENCHES AND STUMP STOOLS IN WALLED
- AREA

PATHWAYS THROUGH PLANTINGS

- VARIETY OF NATIVE/ADAPTED SENSORY PLANTINGS WITH VARIED SIZE, COLOR, TEXTURE, BLOOMTIME
- FLAGSTONE STEPPING STONES/ SECONDARY PATHWAYS (picture 10)
- LARGE EXISTING MOUNDS TO REMAIN
- SEATING NOOKS THROUGH OUT

LEGEND

S:STORAGE	DI: DRAIN INLET
HB: HOSEBIB	M: MARIMBA
AP: ART PANEL	VA: VERTICAL ACCENT
VB: VALVE BOX	WB: WORM BIN
CP: COMPOST	HR: HOSE REEL





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Crestridge Elementary

Omaha, NE Concept Plan | 05.07.18



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What is Whole-Child Development?



Research Summary: Integrated Learning that Develops the Whole Child

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KEY THEMES	RELATED SUB-THEMES
Integrated Learning that Develops the Whole-Child (key skill development occurring simultaneously)	Key skills children are developing in the Outdoor Classroom: • Language/literacy skills • Social/interpersonal skills • Intrapersonal skills • Visual-Spatial skills • Kinesthetic/body awareness skills • Math skills • Science skills • Construction/Engineering skills • Creative representation skills
The Outdoor Classroom: A rich and unique context for learning, "This Never Would Have Happened Indoors"	 An intentionally designed outdoor space with the goal of fostering meaningful learning Rich, versatile open-ended, natural materials that engage all of the senses Child-initiated activities that encourage intrinsic motivation, full engagement, and active learning

Language and Literacy Skills

- Carlo Carlo





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Social / Interpersonal Skills





Science Skills





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Visual Spatial Skills





Kinesthetic Skills





Intrapersonal Skills



Construction / Engineering Skills







A Child-centric Design Approach to Whole-child Learning in an Outdoor Classroom

Child-Centric Design



- Rooted in child development
- Child-sized viewpoint
- Open-ended materials
- Loose-parts play
- Child-sized spaces
- Secondary/tertiary pathways
- Prioritize plant material

Child-Centric Design



- Find opportunities to personalize and evolve the space
- Maximize beauty and visual clarity/reconsider "big idea" design moves



Time, Space & Materials

Research Summary: Supporting Creativity Outdoors

Table 1

Teacher identified themes related to supporting children's imaginations in natural outdoor classrooms

Key Themes*	Sub-themes
Space	flexibility
	predictability
	adequate space
Time	large blocks of uninterrupted time
Materials	abundance of natural materials
	large selection of open-ended materials
Adult Role	caring
	observant
	participating as needed

* It is somewhat artificial to talk about these separately because they are so interlinked, but it was important to look at each key theme as a separate element to fully understand the impact each had overall on the creative experiences of children. Thirty-six of the 50 Nature Notes (72%) included elements of 2 or more of the key themes and 28% had three or more.



Time

"Longer periods provide children the chance to think about what they are doing, consider and test solutions to their problems and be elaborate in their constructions"
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The Boat



Space

"When children have the ability to spend regular daily time in a predictable outdoor environment, it becomes known to them, understood by them and familiar. In other words, it's predictability empowers children to explore their own ideas."

Divide space into clearly delineated areas





Include a complete mix of activity areas

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Art, Dramatic Play, Science Music and Movement











Climbing and Balance









Construction and Engineering













Gardening and Health







Pathways Through Plantings Exploring and Mapping









Water, Sand, Dirt Digging Areas...and more









Materials

Rich, versatile open-ended, natural materials that engage all of the senses

Theory of Loose Parts

In any environment, both the degree of inventiveness and creativity, and the possibility of discovery, are directly proportional to the number and kind of variables in it." Simon Nicholson, 1971





Natural Materials Most Frequently Documented in Observations

- Sticks
 Leaves
- Dirt
 Tree cookies
- Sand
 Tree stumps/logs







Open-Ended Loose Parts







Storage





Degrees of Open-endedness

Who is doing the thinking here?

Evaluating Open-endedness



- Is there a prescribed or predetermined use?
- How will this support children's divergent thinking/ingenuity
- Is there non-standardization across multiple materials of the same type (no two sticks are alike)
- Will children have the freedom to find and combine materials in new ways











Staff Development & Family Engagement



The Teacher's Role in Child-Initiated Activities

Purposefully providing access to materials

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Sharing information/scaffolding at appropriate times



Asking open-ended questions


Allowing children to use materials and space in unconventional ways



Allowing children to experience inclement weather





Inspiring Transformations

Transformations in Spaces: Gomez Elementary School

Gomez Elementary School | Omaha, Nebraska





A ENTRY/EXIT

- ARBOR ADD CONTEXTUAL ELEMENTS (1)
- . GATE PIZZA BOX PAVERS .

GATHERING AREA

- NATURAL, CONTEXTUAL BENCHES (2)
- SMALL STORAGE EWF SURFACING 2

G MESSY MATERIALS

- 12-18" DEEP EWF SURFACING
- 4-8' LONG NATURAL LOG SECTIONS AT PERIMETER
- "LOG OF INTEREST" (3) .
- GIANT TREE COOKIES/"LOOSE PARTS" (4)

MUSIC & MOVEMENT AREA

- ACCESSIBLE STAGE FROM COMPOSITE DECKING
- MARIMBA/AKAMBIRA (5)
- .
- STORAGE UNIT (6) EWF FLOORING SURROUNDING STAGE .

BUILDING AREA

- TREE COOKIE FLOORING (7)
- 2 DISCOVERY TABLES (8) STORAGE UNIT .

B NATURE ART AREA

- LOCAL/REGIONAL FLAGSTONE SURFACING
- NATURE ART TABLE
- STORAGE UNIT
- VARIETY OF NATURAL MATERIALS .



G PATHS THROUGH PLANTINGS

- ACCESSIBLE PATHWAY THROUGHOUT
 - VARIED PATH WIDTH
 - VARIED PLANT MATERIAL THROUGH SEASONS (9) .
 - **EWF SURFACING** .

CLIMBING & CRAWLING AREA

- 5' x 5' SQUARE PLATFORMS FROM DECKING (10)
- EXTEND VERTICALS/ADD HORIZONTALS ACCESSIBLE RAMP & STAIR ACCESS
- TREE HOUSE FABRIC
- STORAGE UNIT

GREENHOUSE

CUSTOM CONSTRUCTION BY OTHERS

DIRT DIGGING AREA Ð

RAISED BEDS • **EWF SURFACING**

SAND AREA

KIWI HUT OR "L" SHAPE GROUND-LEVEL BORDER . SHARED STORAGE

o WATER AREA

- RECIRCULATING
- HAND-PUMP (11)
- SHARED STORAGE UNIT
- EWF SURFACING

LEGEND

S - STORAGE	R - RAMP
B - BENCH	RB - RAISED BED
BB - BALANCE BEAM	M - MARIMBA
EWF - ENGINEERED	BR - BRIDGE
WOOD FIBER	



Gomez Heritage School Omaha, NE

Concept Plan



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After



After

The "Take-Away"

- The richest kind of learning happens holistically.
- Children need time and space to find out and express who they uniquely are.
- Intentionally designed outdoor classrooms can support children in this personally meaningful, whole-child learning. (The space becomes the third teacher).
- Educators who support learning with nature help make amazing things happen.

The "Take-Away"

- Families who enjoy meaningful experiences in the natural world give children an invaluable gift.
- Volunteers and community members play an important role in helping create effective naturefilled spaces.
- "Magic moments" in nature-filled spaces can enrich a child's life forever.



"....nature is the deepest and widest environment for learning that we have." *-Eliza Minnucci, Teacher*



Questions?

The AIA/CES portion of this course has ended.

Thank you!

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- Resource Guides
- Business Cards
- Sign up for more information

natureexplore.org

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